

palms in which the ants were living. This was done by tying one of the legs of each beetle with a thread. Even if the beetles were introduced into the crown, they tried to fly away from the crown, and did not produce any symptom of the beetle attack. When this was done in antless, five years old, coconut palms 7 beetles escaped from the crown and the remaining 18 beetles made holes in the stalks of young leaves. Thereafter the affected palms were cured by introducing red ants.

Even though rhinoceros beetles have hard skin, red ants tried to catch and eat them when the beetles were introduced into the crown of palms with red ants. The vicious bites and injection of formic acid at sensitive parts of the beetles might be the reason for

the control of beetles in ant introduced trees. But red ants have been considered as minor pests for coconut for many years because they cause some difficulties in harvesting (Hill 1983). However they increased yield in coconut palms (Kumaresan 1994).

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30. NEW DISTRIBUTIONAL RECORD OF *TRICHOTRIA TETRACTIS* (ROTATORIA/TRICHOTRIDAE) AND *DAPHNIA LUMHOLTZI* (BRANCHIOPODA/CLADOCERA/DAPHNIDAE) FROM KOLLERU LAKE, ANDHRA PRADESH WITH NOTES ON INDICATOR VALUE

Ecological studies on Kolleru lake (lat. 16° 32' and 16° 47' N, long. 81° 21' and 81° 51' E), Krishna and West Godavari Districts, Andhra Pradesh have been in progress by the junior author. The rotifer plankter, *Trichotria tetractis* occurred in samples from Kolleti Kota in the eastern flank of the lake, Krishna District, while *Daphnia lumholtzi* was observed in samples from Kovvadi Lanka, in the western flank, West Godavari District.

Despite general status reports (Radhakrishna 1988, Seshavatharam and Dutt 1978, and Rama Murthy 1982) comprehensive systematic studies on the zooplankton component from around the region are few and far between (Reddy 1977, Durga Prasad 1981 and Durga Prasad and Padmavathi 1991).

Trichotria tetractis (Ehrenberg, 1832)

Remarks: Rather uncommon in distribution, it has not been reported/recorded as frequently as other rotifer species. The only earlier reports of this rotifer from Indian plankter are by Arora 1966 (Nagpur), Wulfret 1966 (Baroda), Nayar and Nair 1969 (Kerala) and Dhanapathi 1974 (Bhimavaram, West Godavari Dist., A.P.). Elsewhere, Daems and Dumont (1974) recorded *T. tetractis* from Nepal. Apparently, the rotifer, *Trichotria tetractis* is rare in occurrence and was observed only in samples, from Kolleti kota in the eastern zone. Indian studies recording *Trichotria tetractis* as indicator of water quality are therefore not known. Kuezyński (1987) rates the species as occurring in low II or

oligoconductive waters (Conductivity 180 - 500 μ Scms⁻¹). Sládecek (1983) has assigned this species b-0 saprobic degree, i.e. both beta-beta saprobity and oligosaprobity and further computed its I₁ (the indicative weight of the species) as 3 and its S₁ value (individual saprobic index) as 1.6. In Kolleru lake the ploimate rotifer (*T. tetractis*) occurred in waters with high conductivity (130 mS/m), and relatively higher total alkalinity and total (EDTA) hardness, etc. The reported phosphorus and other heavy metal ion contents for eastern zone are much higher than the western zone. Arora (1966) recorded the species from sewage polluted tanks (Jumma & Sakardara tank, Nagpur), with a BOD value ranging between 35-40 ppm. *T. tetractis* therefore is an indicator of eutrophic conditions.

***Daphnia lumholtzi* Sars, 1885**

Remarks: Despite its cosmopolitan distribu-

tion, this species has not been recorded earlier from Kolleru lake. Further, *Daphnia lumholtzi* has also not been documented from other lake ecosystem as well. The only previous record of this daphnid plankter from the state is from Fish ponds in Fish seed farms, A.P. Fisheries, Hyderabad (Michael and Sharma 1988).

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